

25 finds support in claim 8 as filed;
26 finds support in claim 9 as filed;
27 finds support in claim 10 as filed;
28 finds support in claim 11 as filed;
29 finds support at p. 38, line 16;
30 finds support at p. 5, line 12;
31 finds support at p. 14, line 9; and
32 finds support at p. 13, line 1.

Attached hereto is a marked-up version of the changes made to the specification and claims by the current amendment. The attached page is captioned "**Version with markings to show changes made.**"

Applicants submit that the claims are now in condition for allowance and an early notification of such is solicited. Please direct any calls in connection with this application to the undersigned at (415) 781-1989.

Respectfully submitted,

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Date: April 6, 2001

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Version with markings to show changes made

In the specification

The following paragraph is inserted prior to the first line of the application.

This application claims the benefit of priority application Serial No. 60/113,968, filed on December 28, 1998, and is a continuing application of Serial No. 09/256,943, filed February 24, 1999, both of which are hereby expressly incorporated by reference.

In the Claims

Please add the following new claims:

- -20. A method according to claim 18 wherein each of said assay locations comprises a substantially similar set of bioactive agents.
- 21. A method according to claim 18 wherein said substrate is a microtiter plate and each assay location is a microtiter well.
- 22. A method according to claim 18 wherein each discrete site is a bead well.
- 23. A method according to claim 18 wherein each of said subpopulations further comprise an optical signature capable of identifying said bioactive agent.
- 24. A method according to claim 18 wherein each of said subpopulations further comprise an identifier binding ligand that will bind a decoder binding ligand such that the identification of the bioactive agent can be elucidated.
- 25. A method according to claim 19 wherein said first substrate is a microtiter plate.
- 26. A method according to claim 19 or 25 wherein said second substrate comprises a plurality of fiber optic bundles comprising a plurality of individual fibers, each bundle comprising an array location, and each individual fiber comprising a bead well.
- 27. A method according to claim 19 wherein each of said subpopulations further comprise an optical signature capable of identifying said bioactive agent.
- 28. A method according to claim 19 wherein each of said subpopulations further comprise an identifier binding ligand that will bind a decoder binding ligand such that the identification of the bioactive agent can be elucidated.
- 29. A method according to claim 18 or 19 at least one of said target analytes is a nucleic acid.

30. A method according to claim 18 or 19, wherein said microspheres are randomly distributed on said surface.

31. A method according to claim 18 or 19, wherein at least a first subpopulation of microspheres comprises a bioactive agent comprising nucleic acids.

32. A method according to claim 18 or 19, wherein at least a first subpopulation of microspheres comprises a bioactive agent comprising a protein.--